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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,586	12/03/2003	Pil-Ho Yu	1349.1337	3450
21171	7590	07/19/2007	EXAMINER	
STAAS & HALSEY LLP			LEE, JOHN W	
SUITE 700			ART UNIT	
1201 NEW YORK AVENUE, N.W.			PAPER NUMBER	
WASHINGTON, DC 20005			2624	
			MAIL DATE	DELIVERY MODE
			07/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/725,586	<b>Applicant(s)</b> YU, PIL-HO	
	<b>Examiner</b> John Wahnkyo Lee	<b>Art Unit</b> 2624	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 June 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 11-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

1. This application contains claims directed to the following patentably distinct species:

- I. Species corresponding to fig. 1-7 and paragraphs [0015]-[0020] and [0026]- [0043] of the specification.
- II. Species corresponding to paragraphs [0021]-[0024].

The species are independent or distinct because the species uses different method and apparatus to implement the applicant's invention.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species.

MPEP § 809.02(a).

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2. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

3. Applicant's election without traverse of Species I in the reply filed on 12 June 2007 is acknowledged. Claims 1-10 read on species I, and claims 11-21 read on species II. Especially, paragraph [0023] can be read only claims 11-21, but not the claims 1-10. Therefore, claims 11-21 are withdrawn; claims 1-10 are presented for prosecution.

### ***Specification***

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-10 are are rejected under 35 U.S.C. 103(a) as being unpatentable over De Hann et al. (US 5,657,401) in view of Suzuki et al. (US 6,118,552), and further in view of Wittig (US 2004/0066468).

Regarding claim 1, De Hann discloses an apparatus for measuring noise (abstract; Fig. 1 and Fig. 3), comprising: a delay separately delaying the pictures of the input image signal by one period (Fig. 2-11 and Fig. 4-11; col. 3, line 23); an SAD calculator calculating an absolute difference between an average luminance value of a present picture and an average luminance value of a picture of the image signal delayed by the delay (Fig. 1 and Fig. 3; abstract). However, De Hann does not disclose all the claim limitation of claim 1. Instead of De Hann, Suzuki discloses a block average calculator dividing individual pictures of an input image signal into blocks and calculating average luminance values for a plurality of the divided blocks (Figs. 1-30 and 1-32; abstract; claim 9), and Wittig discloses a picture noise selector selecting a desired number-th arranged absolute difference, of a plurality of calculations from the SAD calculator for the input image signal, as a picture noise when absolute differences calculated by the SAD calculator are arranged, in turn, from a smallest value toward a largest value (Figs. 1-14 and 1-16; paragraphs [0013]-[0014]; claims 1-2 and 7-8).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to use Suzuki's invention and Wittig's invention in De

Hann's invention to provide a more reliable method and apparatus for noise measurement as suggested by De Hann (col. 1, lines 49-50).

Regarding claim 2, De Hann further discloses a comparator comparing whether the average luminance value calculated by the block average calculator is within a desired range, wherein the SAD calculator calculates the absolute difference upon the comparator determining that the average luminance value is within the desired range (Figs 1-7 and 4-7, "comparator"; abstract; col. 3, lines 4-16 and 50-67; col. 4, lines 1-13; claims 1 and 9).

Regarding claim 3, Wittig further discloses comprising a regional noise selector selecting a desired arranged number-th picture noise as a regional noise when picture noises selected from pictures of the image signal in a desired region are arranged, in turn, from a smallest one toward a largest one (Fig. 1-14 and 1-16; paragraph [0013]-[0014]; claims 1-2 and 7-8).

Regarding claim 4, Wittig further discloses that the picture noise selector selects a second absolute difference as the picture noise (Fig. 1-14 and 1-16; paragraph [0013]-[0014]; claims 1-2 and 7-8). Based on the disclosure that selecting one of the noise estimate value from the noise estimate selector block, it is inherent and readily apparent that the noise can be any values from the counters such as the second one.

Regarding claim 5, Wittig further discloses that the regional noise selector selects a second picture noise as the regional noise (Fig. 1-14 and 1-16; paragraph [0013]-[0014]; claims 1-2 and 7-8). Based on the disclosure that selecting one of the

noise estimate value from the noise estimate selector block, it is inherent and readily apparent that the noise can be any values from the counters such as the second one.

Regarding claim 6, claim 6 is analogous and corresponds to claim 1. See rejection of claim 1 for further explanation.

Regarding claim 7, claim 7 is analogous and corresponds to claim 2. See rejection of claim 2 for further explanation.

Regarding claim 8, claim 8 is analogous and corresponds to claim 3. See rejection of claim 3 for further explanation.

Regarding claim 9, claim 9 is analogous and corresponds to claim 4. See rejection of claim 4 for further explanation.

Regarding claim 10, claim 10 is analogous and corresponds to claim 5. See rejection of claim 5 for further explanation.

### ***Conclusion***

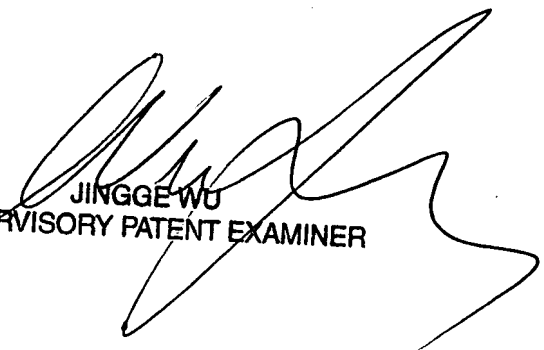
7. Only claims 1-10 are considered for examining the merit of the claims. Claims 1-10 are all rejected.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Wahnkyo Lee whose telephone number is (571) 272-9554. The examiner can normally be reached on Monday - Friday (Alt.) 7:30 a.m. - 5:00 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
JINGGE WU  
SUPERVISORY PATENT EXAMINER

John W. Lee  
(AU 2624)